

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

## PCT

### NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(PCT Rule 71.1)

To:

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14. Juli 2004

WV: ..... / LF: .....

Date of mailing  
(day/month/year)

13.07.2004

Applicant's or agent's file reference  
11334 WO

#### IMPORTANT NOTIFICATION

International application No.  
PCT/IB 02/1223

International filing date (day/month/year)  
16.04.2002

Priority date (day/month/year)  
16.04.2002

Applicant  
ULTRA et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international  
preliminary examining authority:



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Rec'd PCT/PTO 13 OCT 2004

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

|  |   |  |
|--|---|--|
| Applicant's or agent's file reference<br>11334 WO  | <b>FOR FURTHER ACTION</b><br>See Form PCT/PEA/416                         |  |
| International application No.<br>PCT/B 02/01223  | International filing date (day/month/year)<br>16.04.2002                  | Priority date (day/month/year)<br>16.04.2002 |
| International Patent Classification (IPC) or national classification and IPC<br>G07F19/00  |   |  |
| Applicant<br>ULTRA et al.  |   |  |
| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36..</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> |   |  |
| <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>   |   |  |
| Date of submission of the demand<br><br>16.09.2003   | Date of completion of this report<br><br>13.07.2004                       |  |
| Name and mailing address of the international preliminary examining authority:<br><br> European Patent Office<br>D-80298 Munich<br>Tel. +49 89 2399 - 0 Tx: 523656 epmu d<br>Fax: +49 89 2399 - 4465  | Authorized Officer<br><br>Giemsa, F<br><br>Telephone No. +49 89 2399-7997 |  |



**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/IB 02/01223

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**Box No. I Basis of the report**

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-15 as originally filed

**Claims, Numbers**

1-15 received on 28.05.2004 with letter of 28.05.2004

**Drawings, Sheets**

1-2 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/IB 02/01223

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**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

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1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 13

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 13 are so unclear that no meaningful opinion could be formed (*specify*):

**see separate sheet**

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☐ See separate sheet for further details

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/B 02/01223

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

|                               |             |            |
|-------------------------------|-------------|------------|
| Novelty (N)                   | Yes: Claims | 1-12,14-15 |
|                               | No: Claims  |            |
| Inventive step (IS)           | Yes: Claims | 1-12,14-15 |
|                               | No: Claims  |            |
| Industrial applicability (IA) | Yes: Claims | 1-15       |
|                               | No: Claims  |            |

**2. Citations and explanations (Rule 70.7):**

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following document/is/:

D1: EP-A-1 120 761 (KOMMCONSULT DATENVERARBEITUNG) 1 August 2001  
(2001-08-01)

D2: EP-A-0 848 360 (BRITISH TELECOMM) 17 June 1998 (1998-06-17)

**Article 34(2)b PCT**

1. Amended independent claim 1 is based on claims 1, 3 and 4 as originally filed and fulfills the requirements of Article 34(2)b PCT.  
Dependent claims 2 to 13 correspond to dependent claims 2, 5 to 8 and 13 to 19 as originally filed.
2. Newly filed independent claim 14 is based on claim 4 as originally filed, the description, page 10, lines 18-25 and on Figures 1 and 2. Newly filed independent claim 15 is based on claim 4 as originally filed, the description, page 12, lines 8 to 12 and page 12, line 22 to page 13 line 4 and on Figures 1 and 2.

Hence, claims 14 and 15 fulfill the requirements of Article 34(2)b PCT.

**Article 33(2)(3)(4) PCT**

3. Document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and discloses (the references in parentheses applying to this document): a payment terminal device (paragraph 22, Zahlungsausführungsvorrichtung), for coupling a point of sale (paragraph 21, Registrierkasse), a mobile phone (paragraph 20), and a payment centre (paragraph 21, Abrechnungsstelle), wherein the payment terminal device comprises:
  - first interface means for releasably coupling the mobile phone to the payment terminal device (paragraph 22, Schnittstelle)
  - second interface means for coupling the payment centre to the payment terminal device (paragraph 21, Abrechnungsstelle), and

- data processing means coupled to both interface means (paragraph 8, Prozessoreinheit, Figure 1)
- wherein the first interface means comprise coupling (paragraph 22, Sende-/Empfangseinrichtung) means to transfer data between the mobile phone and the processing means via the first interface;
- wherein the first interface means comprise a modem (paragraph 23)
- and wherein the second interface means comprise means (paragraph 24, Codier-/Decodiereinrichtung) for converting data transferred between the second interface means and the payment centre into data being processable by the data processing means and vice versa.

The subject-matter of claim 1 therefore differs from the known payment terminal device in D1 in that the data transferred between the processing means and the mobile phone via the modem are transferred between the modem and the mobile phone as sound or acoustic data.

Hence, the subject-matter of claim 1 is novel over D1 meets the requirements of Article 33 (1) (2) PCT in conjunction with Rule 64.1 PCT.

4. The transmission of sound or acoustic data between the modem and the mobile phone allows any user of a mobile phone to use the payment terminal device without the need for specific low range wireless communication technologies like Bluetooth or IR (infrared) ports.
5. A realistic technical problem to be solved by the skilled person consists in using a general purpose sender/receiver in a payment terminal device that does not require specific communication ports on the mobile phone.
6. D1 prompts the skilled person to using any other sender/receiver than infrared or Bluetooth sender/receiver, which is capable of locally transmitting data, but it only mentions examples of optical and RF technologies but does not mention sound or acoustic data. Thus the skilled person would replace the IR or Bluetooth port by a another wireless technology with improved security features but would not use sound or acoustic data.

The solution proposed in claim 1 of the present application is therefore considered as involving an inventive step (Article 33(3) PCT).

7. The same argumentation is valid for the subject-matter of independent claims 14 and 15 as the use of sound or acoustic data (cf. system claim 14) or the use of an acoustic coupler (cf. method claim 15) are neither known from the prior art nor obvious for the skilled person.

Thus, the subject-matter of claims 14 and 15 are also considered as involving an inventive step (Article 33(3) PCT).

8. All claims fulfill the requirements of (Article 33(4) PCT).

#### **Article 6 PCT**

9. The difference between "a point of sale device" (cf. claim 1) and "a vending machine" (cf. claim 12) is unclear (Article 6 PCT).

Furthermore, it is unclear how a point of sale device (e.g. a vending machine) (cf. claim 13) with an integrated payment terminal device according to one of the claims 1 to 11 can be coupled to the payment terminal device without having an interface which is only claimed in the subject-matter of claim 12 (Article 6 PCT).

The applicant is asked to clarify the above issues in the regional phase.

International Application No. PCT/IB02/01223  
Applicant: ULTRA Proizvodnja elektronskih naprav d.o.o.  
Our Ref.: 11334 WO (KG/PE)  
Date: May 27, 2004

### Claims

1. Payment terminal device (10) for coupling to a point of sale device, a mobile phone (14) and a payment centre (1), wherein the payment terminal device (10) comprises:
  - first interface means (19) for releasably coupling said mobile phone (14) to the payment terminal device (10) to transfer data information between said mobile phone (14) and said payment device (10),
  - second interface means (25) for coupling said payment terminal device (10) and said payment centre (1), to transfer data information between said payment terminal device (10) and said payment centre (1), and
  - data processing means (11) coupled to said first and said second interface means (19, 25) for processing data received from said first and said second interface means (19, 25) and for generating data to be sent to said first and/or said second interface means (19, 25),
  - wherein said first interface means (19) comprise coupling means (20) for coupling said first interface means (19) to said mobile phone (14), for transferring data between said mobile phone (14) and said processing means (11) via said first interface means (19),
  - wherein said first interface means (19) comprises a modem (12) being coupled to said coupling means (20) for converting the data transferred between said mobile phone (14) and said processing means (11) via said first interface means (19),
  - wherein data transferred between said processing means (11) and said mobile phone (14) via said modem (12) are transferred between said modem (12) and said mobile telephone (14) as sound data or acoustic data, and
  - wherein said second interface means (25) comprises means for converting data transferred between second interface device (25) and said payment centre (1) into data being processible by said processing means (11) and said payment centre (1) and vice versa.
2. Payment terminal device according to claim 1, wherein said data transfer between said mobile phone (14) and said payment terminal device (10) is a one-way data transfer.
3. Payment terminal according to claim 1 or 2, wherein said coupling means (20) has an acoustic coupler for transferring sound data or acoustic data between said mobile phone (14) and said payment terminal device.

4. Payment terminal according to claim 3, wherein the acoustic coupler has a microphone (17) for coupling to a speaker (15) of the mobile phone (14).
5. Payment terminal device according to claim 3, wherein the acoustic coupler has a speaker (18) for coupling to a microphone (16) of the mobile phone (14).
6. Payment terminal device according to claim 4 or 5, wherein a distance between said microphone and said speaker is adjustable in order to adapt said acoustic coupler to different types of mobile phones (14).
7. Payment terminal device of one of the preceding claims, wherein the data processing means (11) comprises at least a communication processor having cryptographic capability.
8. Payment terminal device of one of the preceding claims, wherein the payment terminal device (10) comprises data input means.
9. Payment terminal device of claim 8, wherein the data input means comprises at least one keyboard.
10. Payment terminal device of one of the preceding claims, wherein the payment terminal device comprises a printer.
11. Payment terminal device of one of the preceding claims, wherein the payment terminal device comprises a display.
12. Payment terminal device of one of the preceding claims, wherein the payment terminal device comprises an interface to a vending machine.
13. Point of sale device, e.g. a vending machine with an integrated payment terminal according to anyone of claims 1 to 12.
14. Payment system comprising a payment terminal device, a point of sale device, a payment centre mobile phone and mobile cellular telephone network;  
wherein said mobile phone (14) is connected to said payment centre (1) via said mobile cellular telephone network (5);  
said payment centre (1) and the payment terminal are connected via a second direct

connection (32); and

wherein data transferred between said payment terminal (11) and said mobile phone (14) are transferred as sound data or acoustic data.

15. Method for performing a payment procedure by using the payment system of the present invention, said method comprises:

- setting up a connection from the mobile phone (14) to the payment centre (1) via the mobile voice network (5);
- identifying the user at the payment centre (1) using the caller identity to establish and decide whether the caller is a registered user of the system;
- putting the mobile telephone (14) onto the acoustic coupler of the coupling means of the payment terminal device (10);
- transferring the required transaction data or payment data from the payment centre (1) via the voice channel established by the mobile telephone (14) to the payment terminal; then
- verifying if the transaction data correspond to the specifications on the user's account by the payment center and approving or rejecting the transaction via the second direct connection (32) between the payment centre (1) and the payment terminal (11).